ACTION RESEARCH

FOSTERING COMPUTER-MEDIATED L2 INTERACTION BEYOND THE CLASSROOM

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In language learning contexts a primary concern is how to maximise target language interaction both inside and outside of the classroom. With the development of digital technologies, the proliferation of language learning applications, and an increased awareness of how technology can assist in language education, educators are being presented with new opportunities to engage learners in innovative ways. This article reports on how technology was used to deal with the issue of an identified lack of English language interactional opportunities outside of the classroom at the author's university in Japan. An Action Research (AR) project was initiated with a Computer-Mediated Communication (CMC) programme being implemented during an eight-week summer vacation period, in order to provide a platform for students to interact in the target language outside of class. The article reports on the action research methodology undertaken and the results of the CMC programme interactions. It shows that a CMC programme can offer students a convenient and useful platform on which to continue to communicate in the target language while outside of their classes, but that the construction of the platform needs input from both teachers and students.

INTRODUCTION

Fostering L2 interaction both in and out of the classroom, especially when this interaction is occurring in a wider L1 context, is considered fundamental for second-language development (see Dörnyei & Murphey, 2003; Nation, 1990; Van Lier, 1996; Warschauer, 1997). In this way, a primary pedagogical objective of a language course should be to maximise opportunities for students to interact in the target language in their classes (Van Lier, 1996), whilst also capitalising on the various available methods of extending learning beyond the walls of the classroom; particularly in L1 contexts where students have limited interaction with the L2 outside of their classrooms (Nation, 2003).

This article reports on an action research project undertaken at the author's language university in Japan, initiated by the issue of how to increase opportunities for continued English language interaction outside the classroom, specifically in the various holiday periods in the academic year. The principal area of investigation was whether or not students would participate and interact in a Computer-Mediated Communication (CMC) environment, designed to address the problem of a lack of opportunities to foster continued out-of-classroom English language practice over an extended holiday period.

Investigating opportunities to encourage such out-of-class language practice, through the development of a platform for continued L2-directed peer interaction, was considered of high importance in the particular local social context due to the problem of an observed lack of L2 interactional opportunities in the L1 environment outside of the students' language classes. The lack of interactional opportunities was identified through the results of a needs analysis questionnaire administered as part of the course programme which showed that students had very minimal interaction in English outside of the class. The research was further motivated by the opportunity to contribute, in terms of research and pedagogical ideas, to the University's campus-wide focus on developing independent learning abilities in the students.

Consequently, an action-research methodology was selected for the research and a specific framework conceptualised for this investigation, synthesising the established frameworks outlined by Burns (1999)

and Kemmis and McTaggart (1988). Within this framework, an online collaborative forum application was set up in Moodle, a Virtual Learning Environment (VLE), to offer the students an out-of-classroom platform for continued, and independent, L2 interaction. The practical nature of the issue, framed within the theoretical notion of the importance of interaction in language learning, as well as specifics of the local, contextualised environment in which the small-scale study was to be carried out, justified the selection of an action-research approach (see Burns, 1999; Van Lier, 1996 for discussions of the application of action research to such types of studies).

MAXIMISING L2 INTERACTION WITH THE APPLICATION OF TECHNOLOGY

The Importance of Encouraging and Maintaining Classroom Dynamics

A fundamental problem of traditional modes of education is the disconnection between the inside and outside of the classroom (Kukulska-Hulme, 2009). The traditional method of classroom-based education, reliant upon face-to-face interactions between (a) teacher and students and (b) students and students, is necessarily restricted in the possible interactions that can occur beyond the classroom walls (Senior, 2010). This disconnection is most evident not only day to day and week to week as students move between the inside and outside of the classroom, but also between and within each semester as instructional periods are interrupted by annual holidays and institutional events and festivities.

In many contexts where English exists as a foreign language (EFL), such as China, Turkey and Japan, this problem of the disconnection between the inside and outside of the classroom is compounded by the fact that students are learning their L2 while living in their L1 environment. Specifically in Japan, English education generally occurs within the walls of schools, language centres and office buildings, all situated within a largely monolingual and homogenous society (Stanlaw, 1994). In such contexts, students have little opportunity to interact with the L2 outside the classroom. Nation, speaking generally, states that "it is very important that L2 use is maximised in the classroom" (2003, p. 2), and this logically implies the importance of maximising opportunities for L2 use outside of the classroom, where there are even fewer target-language interactional opportunities.

Not only in relation to issues of consistency and continuity in the course programme, but also to issues of class dynamics, out-of-classroom periods in the academic year often represent a large obstruction to the flow of communication and learning between course participants. Dörnyei and Murphey write that "when positive group development processes are attended to, they can reward the group's members and can provide the necessary driving force to pursue group learning goals beyond our expectations" (2003, p. 4). However, a problem arises in extended holiday periods in that it is difficult, without the use of digital technologies, to attend to these positive group development processes. Addressing this issue, various investigations have found that CMC environments can encourage time-and-space displaced synchronous and asynchronous interactions whilst simultaneously fostering relational communication (Finhoult & Sproull, 1990; Walther, 1995; Warschauer, 1997). Indeed Walther writes of CMC's "potential usefulness in conveying organizational trust, warmth, attentiveness, concern and other interpersonal dimensions known to affect work relationships and organizational outcomes" (1995, p. 200).

The Proliferation of Technological Devices Suitable for Language Learning

In the current digital age, the disconnection of the inside and outside of the classroom and the importance of the promotion and development of group dynamics is increasingly being addressed with the proliferation of interactive, communicative and collaborative platforms, such as email, instant messaging, wikis, blogs, forums, social-networking sites and virtual-learning environments (Motteram & Sharma, 2009). Furthermore, these platforms are no longer only tethered to the desk in the form of desktop computers and language learning labs in schools, but are increasingly going mobile, what Warschauer calls time-and-place independence (1997, p. 470), on the devices carried around by students such as laptops, standard mobile phones, smart-phones and tablet computers.

With the proliferation of student-owned devices (see Barrs, 2011), the increase in language learning related apps (see: Godwin-Jones, 2011), and the increase in available access to Internet-enabled hardware in schools, libraries, Internet cafes and homes, there exists the possibility to be able to engage students in target language interactive communication inside and outside of the classroom (Motteram & Sharma, 2009; Warschauer, 1997). In this way students can be encouraged to take more responsibility for their learning, both inside and outside of the educational institutions, which encourages the development of independent learning skills (Gross & Wolff, 2001), a characteristic which is increasingly being seen as of great importance to foster in learners (Benson, 2006). This is especially true in Asian contexts where deference to the teacher and adherence to traditional modes of classroom instruction can limit the opportunities for learning (Daulton, 2008; Reid, 1998).

With specific reference to Japan, numerous surveys and research investigations have shown that a high level of access to Internet-enabled hardware is common (see Lockley, 2011), but that this is also a context where learning often follows traditional models of teacher-centred instruction and involves relative passivity on the part of students (Barrs, 2010; Daulton, 2008). In such contexts, the use of Computer Assisted Language Learning (CALL) can offer viable opportunities for the promotion of the concept of responsibility for one's learning, by putting control of the learning in the hands of the students (Benson, 2006). It is within this context that the research question of whether or not students would participate and interact in an out-of-classroom CMC environment was formulated.

The Conceptual Framework of this Action Research Project

Warschauer writes that it is the sociocultural perspective of looking at language learning which "illuminates the role of social interaction in creating an environment to learn language, learn about language, and learn 'through' language" (1997, p. 471). Further, Van Lier (1996) puts social interaction at the centre of language curriculums and promotes a "heuristic strategy of aiming for a balance between various participation formats" (p. 212). Within such a socio-cultural perspective, the concept of positive group dynamics is of fundamental importance because, as Dörnyei and Murphey (2003) write, "the class group can have a significant impact on the effectiveness of learning" (p. 3). Because of this importance, it is necessary for the teacher to try and foster connectivity and positivity between all the class members and this can be encouraged both in and out of the classroom.

Not only in terms of creating the opportunity for continued input in the language learning process, but also in respect to fostering social interaction mediated by technology, this project's initiation was the desire to create a platform, accessible from outside the class, whereby students could be encouraged to continue to interact with peers in the target language.

METHODOLOGY

Nunan (1992) writes that at its very core, Action Research (AR) consists of "a question/issue, data, and interpretive analysis" (p. 19). It becomes cyclical with the results feeding backing into and extending the initial inquiry (Kemmis & McTaggart, 1988), and can contribute to professional development on the part of the teacher who is investing time in researching their own practices (Wallace, 1998).

The methodological framework for the research was an approach resulting from a synthesis of two established AR frameworks, and Figure 1 shows how approaches outlined by Burns (1999) and Kemmis and McTaggart (1988) were synthesised into two *periods* of AR. This conceptualisation of AR was deemed necessary in order to better recognise both the multiplicity of actions involved in AR, and the fact that AR is often characterised by cycles or spirals that inform on and feed into one another (such as with the pilot investigation period and main intervention period discussed in this article).Whilst the 11 phases suggested by Burns are comprehensive in regard to the coverage of the many different processes involved in AR, their presentation as a list makes them appear, even if that is not the intention, as individual steps in a linear research process. On the other hand, the moments of AR suggested by Kemmis and Taggart

outline a methodology that emphasises various cycles feeding into one another as the research progresses, but imply a fairly simplistic and repetitive cyclical system with little account of the important variation in each cycle or phase. Therefore the framework presented here is not a new approach to AR but rather a new conceptualisation of established approaches. The 4 *moments* of AR put forward by Kemmis and Taggart have been applied to the 11 *phases* put forward by Burns, in order to create a clearer conceptualisation of 2 distinct but interactional *periods*. In this way, the approaches interact with each other in the new conceptualisation to allow for a richer description of the various phases of, and periods in, the AR process than would be possible through the adoption of only one of the frameworks.

<table>
<tr><th>2 Periods of Action Research</th><th>4 Moments of Action Research (Kemmis & Taggart, 1988)</th><th>11 Phases of Action Research (Burns, 1999)</th></tr>
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Figure 1. A synthesised conceptualisation of the action research process.

Data Collection and Analysis Methods

Data for both period 1 (which centred around a pilot investigation) and period 2 (which centred around a main intervention) were collected through the use of two research instruments: (a) the Moodle forum which stored all the digital postings and (b) questionnaires which included open and closed-response items. Moodle allows the digital recording of each post, along with the date and time stamp, and the forum layout shows the interactional order of postings. For the 1st period the data was collected over a 4-week period and for the main intervention the data was collected over 8 weeks. Immediately after the 1st period, questionnaires were distributed in order to collect quantitative and qualitative data on various aspects of the project which could inform the implementation of the main project.

The forum data was analysed quantitatively by recording the total number of postings, the number of replies, and the patterns of replies. This data was then tabulated showing the respective totals and also the mean average of the number of postings and replies. The questionnaires were analysed quantitatively, with summary statistics, in respect to the closed-response questions and qualitatively, by categorisation, in respect to the open-response questions. The qualitative analysis involved categorising the responses, which were then independently checked and agreed upon by two colleagues.

It is important to state here that the results and discussion of this research project are based only on the tangible postings made to the site. Because the project was conducted out-of-classroom and in an asynchronous environment, it is difficult to research the extent to which students interacted with the site

in terms of consumption rather than production. Because a student did not post in the site does not automatically equal a lack of participation. They may have been a *lurker* in the online environment preferring to consume rather than produce. Therefore what follows necessarily focuses only on the production interactions with the site.

Context

The project was carried out at a private 4-year language university in Japan. All students, regardless of language major, are required to take content-based English courses in their freshman year. The primary objectives of the Freshman English programme are to encourage communication, collaboration and cooperation between all class participants, while working in an English-only learning environment. It is also an aim of the course to promote autonomy in language learning, which is supported by the on-campus Self Access Learning Centre (SALC).The majority of students at the university are L1 Japanese users with some international students making up a small percentage of the student body, and on a yearly average around 60% of the students are female. The time targeted for the main intervention stage of the action-research project was the 8-week summer holiday period between semester 1 and 2, with the previous steps being carried out throughout the first semester.

Participants

The action-research project was administered for one class of English-major freshman (first-year) students, (N = 28: 22 female and 6 male), who were all taking both semester 1 and 2 of the compulsory Freshman English course at the author's university. All students were Japanese L1 users and were studying English as an L2. All students on entry to the university are tested and placed in one of three tiers (top, middle and bottom) through a combination of results from a campus-wide proficiency exam, which assesses oral and written abilities, and a pre-TOEFL test, which assesses reading, listening and grammar. The students involved in this action-research project were placed in the middle tier meaning they were of an intermediate English proficiency level (roughly equivalent to IELTS test band 5). Participation in the main summer project was voluntary and not included in their semester grades.

Materials

When students entered the Freshman English course, a questionnaire was administered in order to investigate their access to Internet-enabled computers and mobile devices. This questionnaire formed part of the overall Freshman English course rather than being a specific research tool designed for this action-research project. The results showed that as well as on-campus accessibility to institutional Internet-enabled desktop computers, all students (N = 28) had off-campus Internet access in the form of desktop and/or laptop computers at home. This data proved important when later considering the feasibility of the selection of an Internet-based CMC programme for the action-research project, because it showed that all students would have the necessary access to technology required to participate.

The project utilised the Moodle Virtual Learning Environment (VLE), chosen because of the institution-wide integration of this particular VLE at the author's university. It specifically focused on the use of the Moodle forum application, chosen because of the correlation between the functionality of the forum and the forms of student interaction in a CMC programme which were to be encouraged and investigated by this action-research project. These desired forms of interaction were: (a) all students could communicate in one online English-only space, (b) students could enter this space on or off-campus (i.e. virtual learning), (c) students could comment on other postings in the form of threaded discussions, (d) students could upload pictures and link to websites and videos, and (e) students could participate in a secure online environment. Although other online applications, such as blogs and social-networking sites, offer similar functionalities, it was felt that the institution-wide use of Moodle justified the selection of this particular online tool.

RESULTS

The 1st Period of Action Research

Planning the Action Research (Exploring and Identifying)

The initiation of the action-research project was the identification of the issue that the eight-week summer holiday could have a potentially negative impact on the amount and rate of students' L2 interactions, as well as on the favourable classroom dynamics which had been developed over the first semester. This resulted in the following research question: would students participate in an eight-week summer holiday student-negotiated, computer-mediated communication programme designed to help them to continue interacting in English while outside of the classroom in their L1 environment?

Taking Action (Planning and Collecting Data)

In order to know how to best set-up and administer an eight-week summer vacation CMC project for my class, it was decided that a mini project should be conducted which would allow data to be gathered on interaction rates and any software/hardware related issues. A four-week project was set up during the 2010 football World Cup, utilising a Moodle forum, whereby students were randomly assigned a country's team to follow and had to post a message on the team's tournament performance. Only the students were involved in the interactions which was felt a necessary step for research purposes, an issue discussed in the limitations section. Posting on the forum was made a compulsory activity of the course (although not a part of final grades) because at this stage the primary focus was on collecting data as to how students would interact on the platform, and what technology related issues they would come up against, rather than issues of participation. Students were also encouraged to comment on other people's posts in the hope of generating extended interactions, rather than simple 2-part initiation-responses. The results are presented in Tables 1-3.

Table 1. *Total Number and Average of Postings*

	Number of students in class	Number of students who posted in the Moodle forum (Compulsory participation)	Total number of postings	Average number of posts per student (mean average)
4 Week Programme	28	28 (100% of the class)	47	1.7

Table 2. *Total Number and Average of Replies*

	Number of students in class	Number of students who replied in the Moodle forum	Total number of replies	Average number of replies per student (mean average)
4 Week Programme	28	6 (21.4% of the class)	16	2.7

Table 3. *Total Number and Type Distribution of Postings which Received Replies*

	Number of students in class	Number of students who replied in the Moodle forum	Total number of postings which received replies	A-B (Single)	A-B-A (3-part)	A-B-A-B… (Multiple)
4 Week Programme	28	6 (21.4% of the class)	14	13 93%	0 0%	1 7%

Analysing and Reflecting on the Data (Observation and Reflection)

As can be seen from the data in Tables 1-3, the number of postings in general as well as the number of interactions that went beyond a singular *posting-reply* pattern were low, especially considering this was a 4-week project. Disappointingly, the majority of interactions (93%) involved a simple one or two sentence initiation followed by a single reply, at which point the communication ended:

> Spain won the final!!!!
>
> Miyuki [pseudonyms used throughout]
>
> *Hello Miyuki, I watched the game on live and I'm very glad about the result!!!*
>
> *I enjoyed World Cup very much!!!!!!!!!!*

A post-project questionnaire was distributed in order to investigate the reasons for the low level of interaction. The first question (open-response) asked students to comment on why they thought the amount of interaction was low. The replies were categorised as shown in Table 5.

Table 4. *Categorised Reasons for the Low Number of Replies to Posts*

1. What do you think was the main reason for low level of interaction in the Moodle forum?	No Time	No Interest	No Need (can talk face-to-face in class)	No Answer
	17	6	3	2

The remaining questions (yes/no closed-response) were connected to hardware/software issues, to see if these were having an impact on students' use of the forum platform. The results are shown in Table 5.

Table 5. *Responses to a Question about the Need for More Help with Using Moodle*

2. Do you need more help with how to use the Moodle forum?	Log in	Find our class page	Post a comment	Reply to a comment	Attach a picture	Link to a webpage	Change font/ colour
YES	10	8	9	9	19	21	18
NO	18	20	19	19	9	7	10

As can be seen in Table 4, the preliminary investigation revealed that the two distinct issues of (a) a lack of time, and (b) a lack of interest in the discussion topic, contributed to the low amount of interaction on the site. It can also be suggested that the variance in abilities with *Moodle*-specific technology skills, as seen in Table 5, added to general interactional problems with the forum platform, probably limiting the extent of the interaction with the site (see: Beatty, 2010 for a comprehensive discussion of technology-related problems and how they affect CALL research). These then became three specific areas of focus which could inform upon the next action-research cycle.

The 2nd Period of Action Research

Hypothesising and Speculating Based on the Initial Investigation (Planning)

Based on the findings from the initial investigation, a research hypothesis was generated:

> *Given sufficient time, an interesting topic, and further training in how to use a Moodle forum, students would participate and interact in a voluntary out-of-classroom CMC programme aimed at encouraging and maximising target-language interaction.*

Intervening (Action)

The main project was to be implemented over the 8-week summer vacation between semesters 1 and 2, which would address the issue of *no time* highlighted in the aforementioned survey. As with the 1st period of AR involving the pilot investigation, only the students were involved in the interactions (see the limitations section for a discussion of this). In order to get students more interested in posting and replying on the forum it was deemed necessary and favourable to have students generate the discussion topics. This was done through a class discussion activity whereby students thought of 10 possible forum discussion topics individually, then worked in pairs to streamline their lists into 8 topics, then the pairs combined into groups of 4 to make a list of 5 topics, and finally all the groups collaborated to reduce their choices into a final 4: (a) travel, (b) food, (c) music, (d) festivals. These 4 topics were introduced one by one over the 8 weeks to encourage a focus on one topic at a time. However it is important to state that each forum was left open as another was introduced, to allow students to add more content. This meant that research into the relative popularity of each forum topic was invalid because of the different times that each forum was open. Having only 4 topics allowed for wide coverage of different student interests while at the same time avoiding the possibility of having students' posts and replies spread too thinly across many forum topic discussions.

To address the issue of the need for further Moodle-specific technology training, a series of mini-projects and homework assignments were given to the students to complete between the end of the preliminary investigation and start of the main project. These were constructed to enable further familiarisation with Moodle, especially in relation to forums.

The project was made voluntary, for the important reason that the fundamental question driving the initiation of the action-research project was whether or not students could be encouraged to participate in an extra-curricular language activity.

Observing the Main Cycle of Action Research (Observation)

Tables 6-8 show the total number of postings to the Summer Communication Programme, the total number of replies and a breakdown of the type of replies.

Table 6. *Total Number and Mean of Postings*

	Number of students in class	Number of students who voluntarily posted in the Moodle forum	Total number of postings	Average number of posts per student (mean average)
8 Week Programme	28	25 (89% of the class)	347	14

Table 7. *Total Number and Mean of Replies*

	Number of students in class	Number of students who replied in the Moodle forum	Total number of replies	Average number of replies per student (mean average)
8 Week Programme	28	25 (89% of the class)	314	13

Table 8. *Total Number and Type Distribution of Postings which Received Replies*

	Number of students in class	Number of students who replied in the Moodle forum	Total number of postings which received replies	A-B (Single)	A-B-A (3-part)	A-B-A-B… (Multiple)
8 Week Programme	28	25 (89% of the class)	208	106 51%	99 48%	3 1%

As can be seen from Tables 6-8, there was a large amount of target-language interaction during the 8-week summer vacation; 347 postings were made of which 314 were replies. Of these replies, 48% were of the three-part exchanges pattern which is a significant increase from the pilot project where the majority of postings only received single replies. A typical three-part exchange interaction on the site involved about a paragraph of writing for the initiation, followed by a short reply, and then another short reply from the initiator. A typical three-part exchange interaction is presented here:

> Hello, everyone!
>
> I went to Izu Teddy Bear Museum and Izu Cactus Park.
>
> Teddy Bear Museum has many cute teddy bear dolls. When I went there,
>
> suzy's zoo exihibition was held. In Japan, Izu and Nasu are only places which
>
> Teddy Bear Museums are located in. So I recommend you to go there if you visit
>
> Izu or Nasu! Izu Cactus Park has not only cactuses but also many animals, for example, kangarooes, pelicans, orangutans, especially peacocks are walking freely in the park, so I was able to see them right in front of me!

Bye for now, Keiko [pseudonym]

Hi Keiko, I enjoyed that trip to Izu with you very much!!

I' d like to go there again!! Have a nice vacation.

Hello Saori,

I was happy to meet you on Friday.

I'm sorry I am late Thank you for your comment!

I really really enjoyed this trip with you

I am looking forward to going to YAMANASHI!!!

Let's plan about our trip! See you tomorrow.

Somewhat disappointingly, the majority of the replies (51%) were still of the single *initiation-reply* variety, such as:

Hello, everyone!

i will go to France with my family for 10days(13-22) so i want to eat Franch sweets, for example, makaron,crepe and madeleine and so on. They are French sweets!

By the way, when i went to Switzerland and ate crepe, it's shape was different from Japanese crepe.(↓Switzerland's crepe) so i think French crepe is different from Japanese crepe. If i eat these, i will tell you difference and i will buy you souvenir, but i can't meet you until 24 September, so i worry about deadline of eating..

if it is OK, i will buy you it...! see you!

Chihiro

Hi Chihiro!

Switzerland's crepe looks very delicious!!but it is dificult to eat isn't it?

French sweet is may be wonderful! Please tell me about it later. Have a good trip!

See you.

and only 1% of the interactions involved a continued *threaded* discussion, such as:

Today, I ate Ichigoni which is retort-packed food. This was cooked in good stock. I coulded eat not only sea urchin but also scallop. I love it but I prefer eating at local restaurant to eating retort

pouch.

By the way, I knew some people don't like sea urchin, so I want to introduce next famous food in Aomori. It is apple. There are many kinds of apples. For example tugaru, hokuto, huji.

Please try to eat them!

Hide

Hey Hide

I am a one of persons who like sea urchins!

that apple's picuture looks nice!

I know there are many kinds of apples in Japan like you said.

but i cannot realize the differences of apple's taste.

if you know tell me about it!

Hello Naoko, I can tell you about the difference of apple.

Tugaru weighs 400 gramme, it looks sphere and this sarcocarp is little hard. We can eat it in September.

Hokuto weighs 300 gramme, it looks ellipse and very juicy. We can eat it in October.

Huji weighs 350 gramme and it looks sphere or ellipse. This sarcocarp is coarse. We can eat it in November.

I sometime eat Huji which is sweet!

Wow! Thank you for teaching!

I really understand.

I will try to eat them in each term.

No problem! Today, I ate tugaru but it was little early!

I would like to try to eat this kinds of apple next week.

Good bye

It was hoped that interactions on the forum would be a series of replies connected back to the original post; much like an extended face-to-face discussion. However, this issue of how to encourage longer threads of interaction based on one posting can form the initiation of a further extension to the project. Just as the initial investigation raised issues which were investigated and addressed in the main intervention, issues which themselves were raised in the 2nd period can become initiations of further extensions to the research. Indeed, action research is a methodology which has no real identifiable end, but rather is like a work in progress where issues that arise through the implementation of the first rounds of research can themselves become initiations of further research cycles (Kemmis & McTaggart, 1988; Nunan, 1992).

Reporting, Writing and Presenting about the Research (Reflection)

The statistical data in terms of number of postings/replies shows that the project fostered high levels of independent and target language-focused participation, but it is difficult to report on the effect of the project on classroom dynamics. Although it was hoped that the project would help to foster *positive group development processes* (Dörnyei & Murphey, 2003, p. 4), this was not a specific research question for this investigation. However, it was felt necessary to get students to reflect on why they thought there was a high level of participation and interaction in the programme, so that learners' voices could be included in the research findings. This would help to illuminate the numbers by revealing what the learners felt about participating in the project. These learner reflections are presented and categorised in the Appendix.

A presentation was given on the construction, implementation and evaluation of this action-research project at the CamTESOL 2011 conference in Phnom Phenh, Cambodia. During the presentation, I explained the rationale behind the initiation and construction of the programme and took questions from participants interested in implementing a similar project at their institutions. The research was then written up into an action research article in order to offer wider dissemination.

LIMITATIONS

As addressed earlier, one of the problems of researching asynchronous VLE communications is that it is difficult to gather data on all types of interactions with the programme, rather than just the tangible ones in the form of written postings. Initially, a lack of posting to the programme may appear as a lack of interaction, but students may well be *consuming* the site content without *producing* anything themselves. This is an important area to take into consideration when evaluating such a programme.

A further identified issue is that it was felt necessary in this particular project for the teacher to be excluded from the interactions. This was to ensure that interactions were student initiated and controlled, and to see whether the communication platform would be sustained without teacher intervention. However, this does not mean that the teacher need always be excluded. In fact participation by the teacher may be an excellent addition to the communication, although due thought should be given to how often and it what ways the teacher participates.

It is also recognised that the small number of participants in the study is a potential issue when considering the external validity of the results, but also one which is common in small, localised action research studies. Because of this, no particular statements are being made on the generalisability of the results to other contexts and participants. As an action-research project, the goal was to investigate one particular language learning issue, with the desire that the results could lead to further investigations within the same context as well as to encouraging other educators to implement similar projects in their contexts.

CONCLUSION AND REFLECTIONS

The high level of participation and the large number of postings/replies, all conducted in the target language and from outside of the classroom, show that such a CMC platform was a useful and viable way of increasing the opportunity to engage students in target-language focused interactions.

Further, the categorised reflections presented in the Appendix show that students participated in the project because of the desire to stay in contact with classmates and to practice their English skills over the summer holiday, these being the initiations of the action-research project. This would suggest that CMC projects such as this one can be of value in increasing opportunities for L2 interaction and positively engaging students in target-language practice while out of the classroom.

However, it was also shown through the difference in results between the 1st and 2nd periods of AR that such a CMC platform would need to be not only student-negotiated (in terms of topics) but well-planned and supported (in terms of training in use of the technology) if it were to encourage high levels of participation/interaction.

Through this action research, opportunities unrestricted by time and place (Warschauer, 1997) were created online whereby students could communicate and interact in the L2. Such collaboration and interaction form not only essential underlying principles of the socio-cultural theory of learning (Vygotsky, 1962) but also act as the guiding principles of the institution where the action-research project was carried out. In this way, the project can be seen as beneficial both to the students in terms of their language learning, and to the institution and teachers in terms of being able to increase the ways in which students can be engaged in L2-focused practice.

Although not investigated here, such CMC programmes could be of benefit to the students in possibly maintaining and even developing their L2 skills, despite the interruption of out-of-class periods. Indeed, this could be an area of further investigation in that a teacher may like to research whether or not there is a development in English ability through the use of such a programme, and possibly compare it to a control group of the same linguistic level who had no or very limited L2 interactions in the specified period. Further, the nature of the interactions themselves could become an area of value for extended investigation. Indeed, the planned extension of this project will focus on the types of replies, specifically targeting how to encourage multiple replies to a posting which better mirror typical face-to-face interactions.

APPENDIX. Post-project questionnaire

A post-project questionnaire was distributed at the start of Semester 2 which asked the following question:

25 students in our class wrote a comment or reply in our Summer Moodle Forum and there were about 350 posts in 8 weeks. Why do you think students used this Summer Moodle Forum over the 8-week summer holiday?

(It was only possible to get 25 responses [from 28 students in the class] because of absences at the start of semester 2)

Answer	Category
We could post to it whenever we wanted	**Convenience and usefulness of the Moodle platform**
It was really convenient and useful to communicate	
Because everyone have much time to use computer and make a comment on Moodle	
I think the Moodle was the only way to know about this summer vacation of classmates	
I think every students hard to connect with friends and have less time to use English, so Moodle is useful for positively students. It's easy to connect with friends in English	
Maybe many people know classmates address but we didn't contact with all people, so we couldn't know what everyone did during summer vacation. But by using Moodle, we could contact and know it, so it was popular	
Because we could post and comment when we had time. we didn't meet for a long time so we wanted to come in contact with classmates	
I think everyone wants to improve their English skill during summer vacation	**Opportunity to practice English skills**
We wanted to improve our English skill so we tried to use English during the summer. I could enjoy and improve my English skill	
I think many people want to improve English writing skill or reading skill. For me I want to improve typing skill. This is because to use Moodle was a chance to use PC. This was nice opportunity for me	
I think everyone wants to improve their English ability	
I think everyone in the class wanted to improve their skill	
Many people wanted to communicate with classmates	**Opportunity to stay in contact with friends during the summer holiday**
Because we wanted to communicate with classmate and know what did he/she do	
Because everyone wanted a chance to talk in English	
Because many people wanted to keep in contact with friends during summer vacation	
Many people joined in Moodle in order to talk about everyone's summer vacation	
I think maybe someone my classmates enjoyed to communicate in the Moodle in English	
Because we couldn't meet in the summer vacation, so I want to know what they are doing and communicate with them	
I think the writing became interesting, so it became popular	**Interesting topics**
I think the topics were easy to write and we enjoyed writing comments each other	
The communication on the Moodle was more interesting than we expected	
Everybody always have a positive attitude for English. Moreover articles were interesting	
Because many people were positive and active	**Other**
I think it was good. I thought the comments would be around 100	

ABOUT THE AUTHOR

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